



International

The *Clean Cities International Roadmap* was developed for communities outside of the United States interested in joining the international network of Clean Cities coalitions to develop local alternative fuel transportation markets and learn from U.S. experience. This *Roadmap* provides a brief background of the program and explains the recommended steps communities can take to successfully develop alternative fuel markets and become Clean Cities International coalitions.

Welcome to Clean Cities International

The purpose of the U.S. Department of Energy's (DOE) Clean Cities International (CCI) Program is to assist with the development of safe and effective alternative fuel vehicle (AFV) programs throughout the world. Modeled after the DOE Clean Cities Program that has helped to develop over 80 Clean Cities coalitions in the United States and three border programs, CCI is expanding the successful ten-year U.S. program to assist other interested countries in developing public/private sector partnerships. By encouraging AFV use, CCI helps to achieve environmental quality goals and energy security on local, national, and international levels.¹

CCI coalitions must be committed to working with DOE to provide U.S. alternative fuel industry suppliers and manufacturers with the opportunity to market their products to the community. DOE will partner with the coalition to facilitate these marketing opportunities by introducing the manufacturers and suppliers to the coalition and stakeholders, and inviting the manufacturers and suppliers to participate in the coalition's workshops, conferences, meetings, etc.

To become a member of CCI, coalitions *must* document in their program plan how they will partner with DOE to facilitate marketing opportunities for U.S. alternative fuel industry suppliers and manufacturers.

While CCI membership does not guarantee funding, CCI members are eligible for assistance by DOE in identifying and securing funding for AFV program development and will receive technical assistance in the following areas:

- Developing codes and standards
- Educating policy makers
- Assisting with Clean Cities coalition development
- Assisting with public awareness programs
- Assessing siting of refueling infrastructure
- Developing tax policy
- Developing training programs and training
- Facilitating peer exchange and "lessons learned" opportunities
- Identifying and communicating environmental benefits of AFVs
- Identifying North American AFV and equipment suppliers manuals, through train-the-trainer programs

¹ Clean Cities International defines alternative fuels as: biodiesel, hydrogen, electricity, liquefied petroleum gas (LPG, propane, or autogas), ethanol, methanol, and natural gas. The U.S. government defines which fuels are considered "alternative fuels" for all U.S. government programs. The inclusions on this list are not at the discretion of the Clean Cities International program.

- Providing specialized AFV expertise

CCI is committed to helping interested countries as they develop their AFV markets. This assistance includes working with the international communities to identify international donors that may help to fund AFV projects. Donors could include the:

- African Development Bank
- Asian Development Bank
- Corporacion Andina de Fomento (www.caf.com)
- Inter-American Development Bank
- U.S. Agency for International Development
- U.S. Asian Environmental Partnership
- U.S. Environmental Protection Agency
- U.S. Export Import Bank
- U.S. Trade and Development Agency
- United Nations Development Bank
- United Nations Environmental Program
- World Bank

The Clean Cities International Roadmap

The *Clean Cities International Roadmap* was developed for communities outside of the U.S. interested in joining the international network of Clean Cities coalitions to develop local alternative fuel transportation markets and learn from U.S. experience. This *Roadmap* provides a brief background of the program and explains the recommended steps communities can take to successfully develop alternative fuel markets and become CCI coalitions.

Background of CCI

CCI is one of 40 initiatives established at the 1994 Summit of the Americas and the follow-up Hemispheric Energy Symposium held in 1995. The symposium and the summit addressed the energy-related environmental and economic concerns that face our hemisphere. The symposium was held to start the implementation process for the initiatives established at the summit. Energy cooperation and sustainable development were two of the summit's highest priorities, and Hemispheric Clean Cities, now known as Clean Cities International (CCI), was established.

DOE's Clean Cities program is based on a unique voluntary, community-based approach to AFV deployment. The program provides a framework for the community's business and government AFV advocates to work as a coalition to build a local alternative fuel market. Clean Cities focuses and coordinates the coalition's activities by providing a forum to develop strategies and initiatives to increase the number AFVs in the community. Benefits to forming a coalition include: 1) credibility by having a diverse group of stakeholders striving for the same goal; 2) viability by not being subject to changes in government leadership; 3) ability to provide a greater role by being able to educate elected officials; and 4) reliability by providing manufacturers and equipment suppliers a commitment that a market will be built. Ultimately, strength in numbers is the key—the more stakeholders involved—the greater the market penetration, the broader the

public outreach and support, and the greater chance for long-term sustainability. CCI uses its experience in the United States to help international communities realize the benefits of alternative fuel vehicles. CCI works with the public/private sectors and individuals to help them establish foundations for viable alternative fuel markets.

CCI has shared the model with several countries including Bangladesh, Brazil, China, Costa Rica, the European Union, Guatemala, India, Nepal, Peru, Philippines, and Trinidad & Tobago. Santiago was the first city outside of the United States to form an independent Clean Cities Program. The Clean Cities model was used to help Santiago overcome significant challenges. Chile has virtually no domestic sources of natural gas, while Argentina has an abundant supply of natural gas. A pipeline was built from Argentina to Chile making natural gas a viable transportation fuel for Santiago. In 1998, the Clean Cities Santiago Coalition overcame a big hurdle with the development of light-duty vehicle emissions requirements and a regulatory guide for incorporating compressed natural gas (CNG) in light-duty vehicles. As a result, there are currently 500 converted light-duty CNG vehicles in Santiago, including more than 100 taxis. Additional success stories and program information are available at the Clean Cities website: www.ccities.doe.gov/international.

CCI Roadmap – Six Steps to a Sustainable Alternative Fuel Transportation Market

CCI provides a framework for coalitions to develop a strategic program plan and develop partnerships to expand the local AFV market by encouraging each stakeholder to commit to activities that strengthen the AFV market. The framework includes six steps coalitions can take to become a member of the network of CCI coalitions, to develop an AFV market, and to sustain the coalition. The six steps are:

- Step 1. Form a coalition and hold stakeholder meetings
- Step 2. Appoint a coordinator
- Step 3. Establish stakeholder commitments
- Step 4. Develop a program plan
- Step 5. Celebrate membership
- Step 6. Implement the program plan

Step 1. Form a Coalition and Hold Stakeholder Meetings

Stakeholders are those who are committed to building an AFV market. They are usually businesses and government offices with transportation, energy, and environmental interests. The most effective coalitions maintain a balance of public and private sector stakeholders. Stakeholders typically represent the following businesses and local government offices:

- Local energy, transportation, and environmental offices
- Locally based federal agencies
- Public sector fleet managers and operators
- Private sector fleet managers and operators
- Local utilities and fuel suppliers

- Local, national, and international vehicle and equipment companies and local dealers
- Trade associations
- Vehicle technicians
- Vehicle and equipment training entities (universities, vocational educators, etc.)
- Non governmental organizations (NGOs) and community groups
- Research and development entities such as high-technology firms, universities, and research centers

Successful coalitions include stakeholders that represent niche market fleets. Niche market fleets include:

- Taxis, transit buses and shuttle companies
- Local delivery fleets
- School buses
- Airport vehicles
- Government fleets

Appendix A includes a detailed listing of suggested stakeholders.

A coalition is simply a group of stakeholders working together to build the alternative fuel market. Usually, a few stakeholders hold an initial coalition meeting to identify other potential stakeholders. Initial stakeholder meetings are held to understand the stakeholders' perspectives and gather support, identify a coalition coordinator, identify the coalition's goals, form committees, identify stakeholder-specific assignments, and develop a program plan. Stakeholder participation early in the process is essential to developing the local AFV market and ensuring that the coalition becomes sustainable.

Step 2. Appoint a Coordinator

Once the coalition of dedicated stakeholders is formed, their first job is to identify, recruit, and determine how a dedicated professional coordinator will be funded. The coordinator serves as executive director of the coalition. The most successful coordinators are staffed by dedicated, full-time professionals who have access to community decision-makers. Funding the coordinator position is the coalition's responsibility, although CCI may be able to identify funding donors.

The coalition and coordinator position are usually based at a government agency or stakeholder organization, such as a utility or NGO. Often, that agency or organization funds the coordinator position. If funding a full-time, salaried coordinator is not feasible, excellent staff can sometimes be retained on loan from a stakeholder.

Step 3. Establish Stakeholder Commitments

Individual stakeholders make specific commitments to purchase AFVs, invest in refueling infrastructure, provide AFV maintenance and service, and educate the community and policy makers about alternative fuels and AFVs. Stakeholder commitments to purchase AFVs and

invest in infrastructure are crucial to the success of the Clean Cities Program. The coalition's goals and specific stakeholder commitments are documented as one of the primary sections of the program plan.

Stakeholders make their commitments formal by signing a Memorandum of Understanding (MOU)². The MOU is sometimes signed at the designation ceremony. The purpose of the MOU between CCI and the signatories is to set forth the commitments to purchase AFVs and build infrastructure and to outline respective responsibilities to carry out the objectives of the CCI Program. A sample MOU is included in Appendix B.

Step 4. Develop a Program Plan

Once the coalition is established, a coordinator has been appointed, and stakeholders have committed to purchase AFVs and build infrastructure, the coalition and coordinator work together to develop a program plan. The program plan includes:

1. An assessment of the current local AFV market situation including a description of alternative fuel activities that have taken place to date, geographic information, local fuel sources (providers, importers, etc.), current alternative fuel related laws and regulations, government incentive programs, AFV projects the coalition has completed, and the assistance that the coalition needs to build the market. A description of specific projects and types of support the coalition needs should be included.
2. The coalition's organizational structure and contact information (i.e., names, addresses, phone numbers, and e-mail addresses) of stakeholders. Other coalition contacts can also be included.
3. The coalition's five year specific goals. The coalition's goals should be measurable. Suggested CCI Program goals include:
 - Adopt safe usage of alternative fuels through training, certification, and inspection programs
 - Develop national codes and standards (for vehicles, maintenance shops, fueling stations, etc.)
 - Increase the number of alternative fuel vehicles
 - Increase the number of alternative refueling/recharging facilities
 - Recruit new stakeholders, including U.S. suppliers
 - Promote incentives to increase the use of alternative fuel
 - Communicate Clean Cities/alternative fuel messages to the public
 - Educate the community and policy makers on the advantages of alternative fuels

² An MOU is not a binding contract. It cannot be used to obligate or commit funds or serve as the basis for the transfer of funds.

4. The current number of AFVs and refueling sites in the area and number of AFVs and refueling sites projected to be in the area in the next five years. The projections are based on specific stakeholder commitments. This information can be included in a table format.
5. A description of how the coalition will work with the DOE to provide U.S. alternative fuel industry suppliers and manufacturers the opportunity to market their products to the community.
6. A description of how the coalition will work with CCI to reduce local and global emissions, quantify and record emission reductions, and disseminate information on emission reductions to the public and private sectors.

Submit the completed draft of the coalition's program plan to the CCI Director:

Director, Clean Cities International
U.S. Department of Energy
1000 Independence Ave, SW EE-2K
Washington, DC 20585
Marcy.rood@ee.doe.gov
Fax: 202-586-1558

The CCI review committee reviews and approves program plans. The CCI review committee includes representatives from the U.S. Department of Energy and other international alternative fuel associations.

Step 5. Celebrate Membership

After program plan approval, many coalitions celebrate by hosting a ceremony or event to commemorate and recognize their membership and to generate press. Coalitions often choose to host their event in conjunction with another conference or event to maximize attendance and take the opportunity to invite high visibility speakers and participants.

Celebratory events may be formal or informal. The events typically consist of speeches from invited participants and a presentation of membership certificates. Speakers could include community business and industry leaders, local elected officials, stakeholders, and if available, a U.S. DOE representative.

In addition to speakers, attendees typically include government officials, NGO representatives, media representatives, fleet managers, fuel providers, and others to be recruited as coalition stakeholders.

Step 6. Implement the Program Plan



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After celebrating membership, the coalition continues to meet and work to accomplish the goals outlined in their program plan. Successful coalitions measure their progress to ensure that the program plan is followed. Usually, the coalition's executive steering committee is responsible for monitoring the program and providing guidance to the stakeholders. When the initial goals are accomplished, the coalition establishes new goals to continue building the alternative fuel market.

CCI will request program updates, via conference calls or written reports, to monitor the success of the program.

For more information you can:

- Visit the Clean Cities International website at www.ccities.doe.gov/international
- E-mail the Clean Cities Hotline at hotline@afdc.nrel.gov
- Telephone the Clean Cities Hotline at 1-800-CCITIES
- Contact Clean Cities International Director:

Marcy Rood

Director, Clean Cities International
U.S. Department of Energy
1000 Independence Ave. SW EE-2K
Washington, DC 20585
Phone: 202-586-8161
Fax: 202-586-1558
E-mail: marcy.rood@ee.doe.gov

Appendix A. Suggested Stakeholders

Stakeholders to be part of the Coalition:

Federal government

- Energy Ministry
- Environmental Ministry
- Transportation Ministry
- Facilities Management Office (control of fleet vehicles)
- Tariffs Ministry (control over fuel taxes and taxes on imports)

City government

- Mayor's Office
- Energy Office
- Environmental Office
- Transportation Office
- Facilities Management Office (control of fleet vehicles)
- Education Office (educates the public on a variety of policies)
- City Council

Taxi cab companies and/or union and/or commission

Transit operators and/or authority

School bus operators and/or school administration

Trucking fleets (local delivery)

- Multinational companies in the area, for example Coca Cola

Fuel Provider(s)

Local universities or organizations involved in training mechanics/drivers

Environmental organizations, other NGOs

Vehicle manufacturers (depending on targeted fleets)

- Two-stroke conversion engine companies
- Heavy-duty engine manufacturers
- Light-duty alternative fuel vehicles (AFVs)
- Conversion kit manufacturers for light-duty AFVs

Station equipment manufacturers

- Compressors
- Pumps
- Turnkey companies

**Appendix B.
Sample Memorandum of Understanding**

“Your Coalition Name” is formally established to develop a local alternative fuel market by creating effective alternative fuel vehicle (AFV) programs and encouraging the use of alternative fuels in the transportation sector to achieve environmental quality goals and energy security.

MEMORANDUM OF UNDERSTANDING

By and Among,

“Signatory Organizations Listed”

and
U.S. Department of Energy’s Clean Cities International

INTRODUCTION

Background

The purpose of the U.S. Department of Energy's (DOE) Clean Cities International (CCI) Program is to assist with the development of safe and effective alternative fuel vehicle programs throughout the world. Modeled after the DOE Clean Cities Program, CCI is expanding the successful U.S. program to assist other interested countries in developing public/private sector partnerships. By encouraging AFV use, CCI helps to achieve environmental quality goals and energy security on local, national, and international levels

The CCI Program provides a framework for the community's business and government AFV advocates to work as a coalition to build a local alternative fuel market. The framework focuses and coordinates the coalition's activities by providing a forum to develop strategies and initiatives to increase the number AFVs in the community.

Purpose

The purpose of the Memorandum of Understanding (MOU) between CCI and the signatories is to set forth the commitments to work to meet the goals of the signatories' national energy policy, to purchase AFVs, to build infrastructure, and to outline respective responsibilities to carry out the objectives of the CCI Program.

Signatories under this MOU undertake their best efforts to achieve the specific goals and objectives set forth in the Program Plan.

An MOU is not a binding contract. It cannot be used to obligate or commit funds or to serve as the basis for the transfer of funds.

Clean Cities Coordinator Responsibilities

- Commit to working with DOE to provide U.S. alternative fuel industry suppliers and manufacturers the opportunity to market their products to the community. DOE will partner with the coalition to facilitate these marketing opportunities by introducing the manufacturers and suppliers to the coalition and stakeholders, and inviting the manufacturers and suppliers to participate in the coalition's workshops, conferences, meetings, etc.
- Serve as Executive Director of the coalition
- Assist with overall implementation of the Program Plan and development of new goals
- Work with stakeholders and other interested parties to build the local alternative fuel market
- Represent Clean Cities and the coalition at local functions
- Assist with recruitment of stakeholders, including U.S. suppliers

- Promote incentives to increase the use of alternative fuels
- Communicate the Clean Cities message to the public
- Educate the community and policy makers on the advantages of AFVs

CCI Responsibilities

- Commit to helping interested countries as they develop their AFV markets
- Provide a framework for the community's business and government AFV advocates to work as a coalition to build a local alternative fuel market
- Partner with the coalition to facilitate marketing opportunities for U.S. alternative fuel industry suppliers and manufacturers
- Assist with identifying and securing funding to fund AFV projects, develop codes and standards, educate policy makers; develop tax policy, facilitate peer exchange opportunities, assist with public awareness, provide specialized AFV expertise, develop training programs and training manuals through train-the-trainer programs, identify North American AFV and equipment suppliers, and assist with Clean Cities coalition development
- Provide alternative fuel industry information via www.ccities.doe.gov and www.ccities.doe.gov/international
- Provide a hotline/clearinghouse to answer questions and provide technical and other information via e-mail at hotline@afdc.nrel.gov

Stakeholder Responsibilities

- Agree to fulfill voluntary commitments, as stated in the program plan, to purchase AFVs, invest in refueling infrastructure, provide AFV maintenance and service, and educate the community and policy makers about alternative fuels and AFVs
- Commit to working with CCI to provide U.S. alternative fuel industry suppliers and manufacturers the opportunity to market their products to the community. CCI will partner with the coalition to facilitate these marketing opportunities by introducing the manufacturers and suppliers to the coalition and stakeholders, and inviting the manufacturers and suppliers to participate in the coalition's workshops, conferences, meetings, etc.
- Assist with overall implementation of the Program Plan and development of new goals
- Work with other interested parties to build the local alternative fuel market
- Represent Clean Cities and the coalition at local functions
- Assist with recruitment of stakeholders, including U.S. suppliers
- Promote incentives to increase the use of alternative fuels
- Communicate the Clean Cities message to the public
- Educate the community and policy makers on the advantages of AFVs

By signing this MOU, the Coordinator, CCI, and Stakeholders agree to put forth their best efforts to achieve the AFV market development goals defined in the Program Plan.

MOU Signatories

Name, Title, Entity

Name, Title, Entity

Name, Title, Entity

Name, Title, Entity

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